generating the output image from the source image by variably dithering the colors of the output image on a ~~regional~~ per pixel basis according to the dithering levels specified in the received dithering mask; wherein the colors of the output image are dithered by creating pixel patterns of colors that are available in the limited color palette to simulate colors that are not available in the limited color palette.

2. (Original) The method of claim 1, wherein the received dithering mask is an alpha channel of the received electronic image.

3. (Canceled)

4. (Original) The method of claim 1, wherein the output image is a GIF or PNG8 image.

5. (Previously Presented) A method for generating an output image from a source image, wherein the colors of the output image are generated from a limited color palette, comprising:

receiving a true color for a pixel in the output image from a corresponding pixel in the source image;

receiving an accumulated color error for the pixel in the output image from a plurality of neighboring pixels;

calculating a target color for the output image pixel from the true color and the accumulated color error;

finding a paint color in the limited color palette, wherein the paint color is the color in the limited color palette that is closest to the target color;

painting the pixel in the output image with the paint color;

receiving a dithering level from a corresponding pixel in a dithering mask associated with the source image, wherein the dithering level specifies the amount of the output pixel's color

error to diffuse to neighboring pixels, and wherein the dithering level can specify that less than the total amount of the output pixel's color error is diffused to neighboring pixels; and

calculating a color error to diffuse to neighboring pixels in the output image from the target color, the paint color, and the dithering level.

6. (Previously Presented) The method of claim 5, wherein the accumulated color error received by the output image pixel from the plurality of neighboring pixels represents the sum of the color errors that have been diffused to the current output pixel by the dithering algorithm.

7. (Previously Presented) The method of claim 5, wherein the color error diffused to the neighboring pixels in the output image is a percentage of the difference between the output image pixel's target and paint colors, wherein the percentage is determined by the dithering level received from the corresponding pixel in the dithering mask.

8. (Previously Presented) The method of claim 5, wherein calculating a target color for the output image pixel comprises adding the accumulated color error received from the plurality of neighboring pixels to the true color of the corresponding pixel in the source image.

9. (Currently Amended) A computer program product configured to generate an output image from a source image, wherein the colors of the output image are generated from a limited color palette, comprising:

receiving an electronic source image containing a plurality of colors not all of which can be painted in the output image;

receiving a dithering mask corresponding to the source image, wherein the dithering mask contains a plurality of dithering levels specifying, on a per pixel basis, the degree to which colors in corresponding regions of the source image can be variably dithered to paint the output image; and

generating the output image from the source image by variably dithering the colors of the output image on a ~~regional~~ per pixel basis according to the dithering levels specified in the received dithering mask; wherein the colors of the output image are dithered by creating pixel patterns of colors that are available in the limited color palette to simulate colors that are not available in the limited color palette.

10. (Previously Presented) A computer program product configured to generate an output image with a limited color palette from a source image, the computer program product comprising instructions operable to cause a computer program to :

receive a true color for a pixel in the output image from a corresponding pixel in the source image;

receive an accumulated color error for the pixel in the output image from a plurality of neighboring pixels;

calculate a target color for the output image pixel from the true color and the accumulated color error;

find a paint color in the limited color palette, wherein the paint color is the color in the limited color palette that is closest to the target color;

paint the pixel in the output image with the paint color;

receive a dithering level from a corresponding pixel in a dithering mask associated with the source image, wherein the dithering level specifies the amount of the output pixel's color error to diffuse to neighboring pixels, and wherein the dithering level can specify that less than the total amount of the output pixel's color error is diffused to neighboring pixels; and

calculate a color error to diffuse to neighboring pixels in the output image from the target color, the paint color, and the dithering level.

11. (Previously Presented) The computer program product of claim 9, wherein the received dithering mask is an alpha channel of the received electronic image.

12. (Canceled)

13. (Previously Presented) The computer program product of claim 10, wherein the accumulated color error received by the output image pixel from the plurality of neighboring pixels represents the sum of the color errors that have been diffused to the current output pixel by the dithering algorithm.

14. (Previously Presented) The computer program product of claim 10, wherein the color error diffused to the neighboring pixels in the output image is a percentage of the difference between the output image pixel's target and paint colors, wherein the percentage is determined by the dithering level received from the corresponding pixel in the dithering mask.

15. (Previously Presented) The computer program product of claim 10, wherein the instructions operable to cause the programmable processor to calculate a target color for the output image pixel comprises instructions operable to cause the programmable processor to add the accumulated color error received from the plurality of neighboring pixels to the true color of the corresponding pixel in the source image.